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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,755	03/06/2002	Tomoko Koyama	112158	5209

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EXAMINER

HU, SHOUXIANG

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,755

Applicant(s)

KOYAMA ET AL.

Examiner

Shouxiang Hu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6,8,9 and 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,10-12 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Claims 6, 8-9, and 13-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 10.

Applicant's election with traverse of Species 1 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application can be made without serious burden. This is not found persuasive because: as explained in the previous office action, structures in the inventions of Species 1-4 are substantially distinctive, examination for all these inventions would require search for both lateral-injection and vertical-injection light-emitting devices, which require the search of a number of large classes and subclasses, including 257/79-103; 438/22, 24, 46-47; 372/43-5, and many non-patent publications as well. Apparently, search and examination of the entire application would impose a substantially serious burden upon the examiner.

The requirement is still deemed proper. In addition, it is re-assured that, upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141.

Claim Objections

Claims 10-12 are objected to because of the following informalities and/or defects:

In claim 10, the term of "at least one transport layer of a first electric charge transport layer" should read as: --at least a first electric charge transport layer--; and, the term of "the second electric charge transport layer" should read as: --a second electric charge transport layer--.

In claim 12, the term of "keeping away" should read as: --insulated--; and the term of "included" should read as: --on (or below)--, since the third (or fourth) electrode is a conductor, which should not be regarded as a part of the first (or second) dielectric multi-layered film.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1-3, 5, 7, 10 and 11, as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 102(e) as being anticipated by Coman et al. ("Coman"; US 6320,206).

Coman discloses a light-emitting device (Fig. 2), comprising: a substrate (12); a light-emitting layer (at least the middle portion of layer 18) in which light is generated by electro-luminescence; first and second dielectric multi-layered films (12 and 20); a first electric charge transport layer disposed on one side of the light-emitting layer (at least the bottom portion of layer 18b) and the second electric charge transport layer (at least the upper portion of layer 18a) disposed on the other side of the light-emitting layer, a first electrode (22b) to apply first electric charges to the light-emitting layer; and a second electrode (22a) to apply second electric charges to the light-emitting layer, wherein the first and second electrodes are disposed to avoid overlap with at least part of a light-emitting region in the light-emitting layer, as viewed from a light emitting direction.

Regarding claims 2, 3, 10 and 11, it is noted that the first and second electrodes (22a and 22b) of Coman can each be regarded as being formed of a pair of electrode layers (i.e., the pair of the up portion layer and the bottom portion layer).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-17, as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 103(a) as being unpatentable over Coman et al. ("Coman"; US 6320,206).

The disclosure of Coman is discussed as applied to claims 1-3, 5, 7, 10 and 11 above.

Although Coman does not expressly disclose that the light-emitting device can be used in display device, one of ordinary skill in the art would readily recognize that a light-emitting device can be readily used in a display element in a device or instrument for a desired display performance, as evidenced in the prior art references such as US 5,164,949 (see col.1, lines 20-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the light-emitting device of Coman to a display device (or instrument), so that a display device (or instrument) with desired display performance would be obtained.

Claims 4 and 12, as being best understood in view of the claim objections above, are rejected under 35 U.S.C. 103(a) as being unpatentable over Coman et al. ("Coman"; US 6320,206) in view of Ovshinsky et al. ("Ovshinsky"; US 4,766,471).

The disclosure of Coman is discussed as applied to claims 1-3, 5, 7, 10,11 and 16-18 above.

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Although Coman does not expressly disclose that the light-emitting device can further include third and fourth electrodes on the two sides of the light-emitting layer, one of ordinary skill in the art would readily recognize that multiple electro-optical components each having at least one electrode can be formed respectively on the two sides of the light-emitting layer for forming integrated electro-optical devices, as evidenced in Ovshinsky (see the third electrode G2 and the fourth electrode G1 along with their insulation layers in Figs. 8A and 8B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the integrated electro-optical structure of Ovshinsky into the light-emitting device of Coman, so that an electro-optical device with integrated functionalities would be obtained.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References C-F are cited as being related to a light-emitting structure.

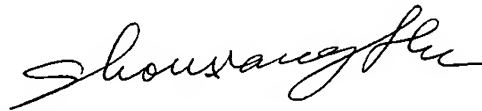
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is (703)306-5729. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (703) 308-1690. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SH
October 27, 2003



SHOUXIANG HU
PRIMARY EXAMINER